

205.5 - Radiopharmaceuticals (solution and gaseous forms)

These SRMs are intended for the calibration of radioactivity-measuring instruments. They are calibrated in terms of activity per gram of solution (except SRM 4415, which is calibrated in terms of activity). Each SRM is contained in a 5 mL flame-sealed glass ampoule and, except for SRM 4415, consists of the radionuclide dissolved in an aqueous solution (usually acidic). These SRMs are produced in collaboration with the NRMAP, Inc. and, because of the short half lives, are available only at specific times.

When an import permit for radioactive material is required of a customer outside the U.S., NIST must have a copy to complete an order and facilitate shipment.

["Radionuclide Calibration Services"](#)

["Radioactive SRM Purchasing Instructions & License Certification Form"](#)

["Radioactive SRMs General Info"](#)

PLEASE NOTE: The tables are presented to facilitate comparisons among a family of materials to help customers select the best SRM for their needs. For specific values and uncertainties, the certificate is the only official source.

SRM	Description	Unit of Issue	Half Life (days)	Month Produced **	NRC License or Equivalent Required*
4401L	Iodine-131 Radioactivity Standard	5 mL	8.0	February	X
4404L	Thallium-201 Radioactivity Standard	5 mL	3.0	June	X
4407L	Iodine-125 Radioactivity Standard	5 mL	59.4	December	X
4410H	Technetium-99m Radioactivity Standard	5 mL	0.3	September	X
4412L	Molybdenum-99 Radioactivity Standard	5 mL	2.74	April	X
4415L	Xenon-133 Radioactivity Standard	5 mL	5.243	Sept	X
4416L	Gallium-67 Radioactivity Standard	5 mL	3.3	May	X
4417L	Indium-111 Radioactivity Standard	5 mL	2.8	August	X
4427L	Yttrium-90 Radioactivity Standard	5 mL	64.0 hrs	October	X

*If no "X" then license is not required unless the institution possesses a specific license that covers the listed radionuclide.

**The dates listed here are estimates. Please contact the SRM Sales Office to confirm availability and order date deadline for these SRMs.

- Certified values are normal font
- Reference values are italicized
- Values in parentheses are for information only